Transgender Health
Volume 8, Number 1, 2023
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DOI: 10.1089/trgh.2021.0033

REVIEW

Factors Associated with Experiences of Gender-Affirming Health Care: A Systematic Review

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Abstract

Purpose: Transgender people often pursue gender-affirming health care (GAH), such as hormone therapy and/or surgeries. While research has begun to explore influences on general health care for transgender individuals, less is known about the experiences of GAH specifically. We aimed to systematically review the factors associated with experiences of GAH.

Methods: PubMed, EMBASE, PsycInfo, and Web of Science were systematically searched for relevant literature using a predetermined search strategy. Studies were screened by two researchers to determine whether they fit the inclusion criteria. Following quality appraisal and data extraction, results were thematically analyzed.

Results: Thirty-eight studies were included in the review. Factors associated with experiences of GAH were broadly categorized as follows: (i) sociodemographic factors, (ii) treatment-related factors, (iii) psychosocial factors, and (iv) health care interactions, with health care interactions, in particular, being strong determinants of experience.

Conclusion: Findings suggest that experiences of GAH may be determined by a number of diverse factors, which have implications for understanding how to better support those undergoing transition. In particular, health care professionals play a key role in determining how transgender people experience treatment, which should be considered when providing care for this population.

Keywords: barriers to care; gender dysphoria; gender identity; gender transition; transgender

Introduction

Transgender is an umbrella term used to describe any individual whose gender identity differs from that which is typically associated with the sex they were assigned at birth.[1–3] The misalignment with one's birth sex causes transgender people to experience a specific type of distress known as gender dysphoria, which often leads them to seek gender-affirming health care (GAH).[4]

This health care may involve a range of treatments such as counseling, puberty suppression, gender-affirming hormone therapy (GAHT), various surgeries, and speech therapy, all of which are designed to alleviate gender dysphoria by bringing one's body into alignment with one's gender identity.[5]

While the benefits of GAH—such as a reduction in gender dysphoria and increases in quality of life—have been widely reported,[6–10] negative experiences, such as being asked inappropriate questions and having to endure long waiting times, appear to be common.[2,11–13,30] This suggests that the process of seeking GAH is difficult for some, implying that there is a need to identify strategies to better support patients during the process of seeking and undergoing this health care.

One factor that is likely to influence health care experience in this context is the interactions patients have with health care professionals (HCPs). For example, a previous systematic review[2] found that HCP

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knowledge and communication, as well as interactions with health care systems, influenced transgender patient's experiences in general health care settings. This finding has also been echoed in other studies,[13,14,30] suggesting that identifying ways to improve interactions with HCPs may have benefits for patients.

Although other reviews[2] give some indication of the factors that may impact experience of general health care among transgender people more generally, little work to date has systematically explored the factors that associate with experiences of GAH specifically. It is likely that a range of contextual and individual factors may influence such experiences, including, for example, sociodemographic[15] and psychological[16] factors; however, this has been understudied to date.

This study aims to address this gap by means of a systematic review of the factors that influence patient experiences of GAH. Identifying these factors may help HCPs understand the patients who may be most at risk of negative experiences, while also informing the development of interventions to help better support patients undergoing GAH.

Methods

Protocol and registration

The review is reported in line with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines[17] and was registered on the Open Science Framework (DOI: 10.17605/OSF.IO/J5YSH). As the review did not involve the collection of primary data, it was exempt from ethical review by Maynooth University's ethics committee.

Search methods

The following databases were searched for relevant articles in July 2019 (search 1), and again in May 2021 (search 2): PubMed, Embase, PsycInfo, and Web of Science. Search terms related to the following factors: (i) transgender identity, (ii) GAH, and (iii) experiences. To capture as broad a range of studies as possible, an extensive number of search terms were developed, based on previous literature[2,18] which can be seen in the Supplementary Appendix.

Inclusion and exclusion criteria

Publications in English from inception until May 2021 that reported primary data were considered for inclusion. Participants had to be transgender adults (defined as having a gender identity differing from one's assigned sex at birth), who had accessed some form of GAH such as GAHT or surgeries, or indirect treatments such as counseling or fertility treatments, which are sometimes required to access further GAH.

There were no restrictions on study design, but studies must have collected primary data to be included. Studies that involved measures of patient-reported experiences with or following GAH, as well as factors influencing these experiences using qualitative, quantitative, and mixed methods data collection tools were included. Studies that did not meet all the inclusion criteria were excluded, as well as opinion pieces and case studies.

Data extraction and analysis

Figure 1 shows the screening process. Following screening, data extracted from eligible studies included the following: authors, year published, location, study design, sample size, gender identities of participants, age, treatment undergone, measure of experience, and study aims. Due to the heterogeneity of findings, a meta-analysis was not deemed appropriate. Therefore, results were analyzed using the process of narrative synthesis. Specifically, factors shown to influence or associate with patient-reported experiences were identified and extracted, before being categorized according to emergent themes.

Quality appraisal

Due to the inclusion of both quantitative and qualitative studies in this review, the Mixed Methods Appraisal Tool (MMAT) was used to appraise the methodological quality of included studies.[19] As the use of this tool requires one to make subjective judgments about methodological quality, two researchers conducted this appraisal independently, as advised. Any conflict was resolved by discussion.

Results

Overview of studies

A total of 38 studies were included in this review (Table 1).[20–24,26–58] Included studies were published between 2008 and 2021 and were from a range of locations, including the USA ($n=16$),[20–24,26–35,58] Canada ($n=5$),[36–40] the United Kingdom ($n=5$),[41–45] Sweden ($n=3$),[46–48] Australia ($n=2$),[49,50] The Netherlands ($n=2$),[51,52] New Zealand ($n=1$),[53] Iran ($n=1$),[54] France ($n=1$),[55] and Nepal ($n=1$),[56] and one study that included participants from The Netherlands, Belgium, and Germany.[57]

The majority of studies had a sample with various gender identities ($n=20$),[22,24,26,30,31,33,36,39–43,45–47,49,50,53,57]

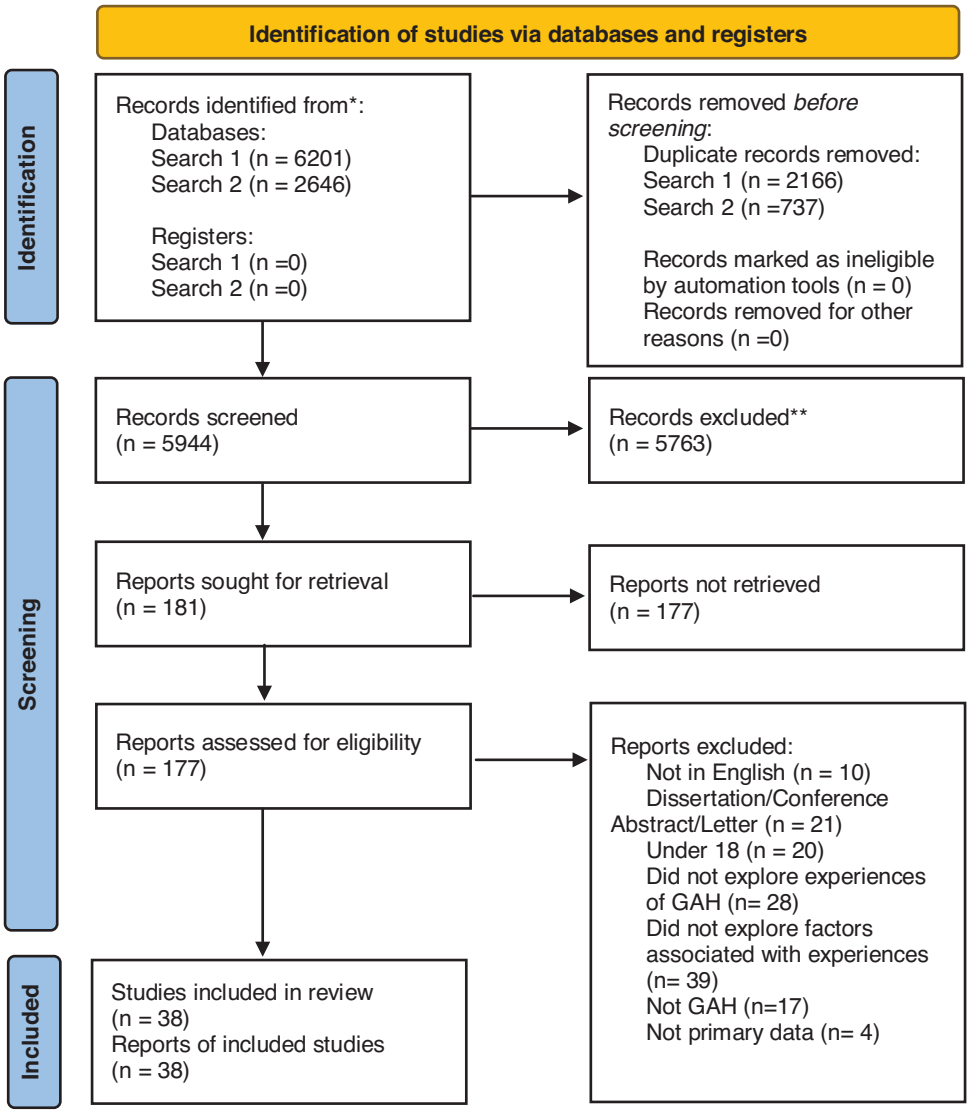

FIG. 1. PRISMA flowchart. PRISMA, Preferred Reporting Items for Systematic Reviews and Meta-Analyses.

while other studies focused specifically on transgender men ($n=5$),[21,32,51,52,55] transgender women ($n=6$),[23,29,44,48,56,58] and nonbinary people ($n=1$).[20] Some studies did not discuss the specific identities of participants ($n=6$).[27,28,35,37,38,54] Most studies explored experiences of a range of gender-affirming procedures ($n=22$),[20,22–24,26,27,29,30,32,34,35,40,41,43–50,57,58] although some explored specific treatments and procedures, such as mastectomy ($n=5$),[21,28,37,51,52] GAHT ($n=4$)[44,53,56,58] and psychiatry ($n=3$).[38,39,42]

Sample sizes ranged from 4 to 697, with a total sample size of 4011. Ages of participants ranged from 18 to 89 years. Eighteen of the studies used quantitative methods,[21,22,26–28,31–34,37,41,48,50–52,54,55,57] 17 used qualitative methods,[20,23,29,30,35,36,38–40,42,43,45–47,53,56,58] and 3 used mixed methods.[24,44,49]

Methodological quality

Nineteen studies[20,26,29,30,35,36,38–47,53,56–58] (16 qualitative, 2 quantitative, and 1 mixed methods) met all 5 of the MMAT criteria. Some of the main weaknesses observed were low or unreported response rates, no discussion of whether the sample was representative of the wider population, and not discussing possible confounding variables.

Table 1. Study Characteristics

Authors (year)	Aims	Study design	Country	Sample size	Gender identities	Age	Treatment undergone	Measure of experience	MMAT score
Agarwal et al. (2018)[21]	To explore changes in body image, wellbeing and satisfaction following mastectomy in transgender men	Quantitative nonrandomized; surveys	USA	42	Transgender men	18–50 ($M = 27.7$)	Mastectomy	BREAST-Q Reduction/ Mastopexy Module, Body Uneasiness Test (BUT-A)	5
Bell and Purkey (2019)[36]	To explore transgender patients' retrospective expectations and experiences of primary care	Qualitative; interviews	Canada	11	Various transgender identities (4 transgender men, 6 transgender women, and 1 gender non-conforming)	Not specified (all over 18)	Primary care (for patients who had undergone HRT/ surgery)	Self-reported experiences	5
Ho and Mussap (2017)[50]	To assess satisfaction with HCPs and the standards of care among a transgender sample	Quantitative descriptive study; survey	Australia	161	Various transgender identities (3:1 assigned male : assigned female)	18–76 $M = 41.15$ SD = 15.40	Various Gender Affirming Treatments	Satisfaction with the Standards of Care (Likert), Satisfaction with HCPs (Likert),	3
Hughto et al. (2018)[58]	To explore the healthcare experiences of transgender women who have been incarcerated in sex-segregated prisons	Qualitative; interviews	USA	20	Transgender women	$M = 36.9$ SD = 10	HRT	Self-reported experiences	5
Khoosal, Grover, and Terry (2011)[41]	To review transgender patients' satisfaction with several areas of a gender realignment service*	Quantitative descriptive study; survey	UK	112	Various transgender identities (104 MtF, 8 FtM)	24–75 $M = 46.66$ SD = 12.43	Surgeries	Likert scales: post-operative satisfaction, complications, support from professionals, user organisations, family and friends, quality of life, relationships, self-esteem, confidence, body image, sexual activity, comfort with new gender	4
Linander et al. (2016)[47]	To examine patients' experiences of seeking gender affirming healthcare in Sweden	Qualitative; interviews	Sweden	14	Various transgender identities (7 women, 4 men, 3 non-binary/ intergender)	23–69	Various Gender Affirming Treatments	Self-reported experiences	5
Lykens, LeBlanc, and Bockting (2018)[20]	To explore healthcare experiences among a sample of non-binary and genderqueer young adults	Qualitative; interviews	USA	10	Genderqueer/non-binary	23–33	Various Gender Affirming Treatments	Self-reported experiences	5
Owen-Smith et al. (2018)[22]	To examine how body-gender congruence, body image, satisfaction, depression, and anxiety differed by stage of medical transition in a transgender sample	Quantitative descriptive study; survey	USA	697	Various transgender identities (347 transmasculine, and 350 transfeminine)	Not specified (all over 18)	Various Gender Affirming Treatments	Transgender Congruence Scale, Revised Physical Self-Perception Profile, 10-item Center for Epidemiologic Studies Depression, Beck Anxiety Index	4
Nemoto, Operario, and Keatley (2008)[23]	To explore health and social service needs among a sample of transgender women of colour in San Francisco	Quantitative descriptive study; focus groups and survey interviews	USA	380	Transgender women	Not specified	HRT, silicone injections, surgery	Self reported, Likert scales for healthcare engaged with and barriers	4

(*continued*)

Table 1. (Continued)

Authors (year)	Aims	Study design	Country	Sample size	Gender identities	Age	Treatment undergone	Measure of experience	MMAT score
Radix, Lelutiu-Weinberger, and Gamarel (2014)[24]	To assess transgender patients' needs, satisfaction and healthcare utilization in New York City in order to determine points of intervention	Mixed Methods; survey, focus groups	USA	46	Various transgender identities (5 women, 21 transgender women, 3 men, 8 transgender men, 1 transgender, and 8 genderqueer)	18–64	Various gender affirming procedures	Self-reported experiences	5
Riggs, Coleman, and Due (2014)[49]	To explore transgender patients' healthcare experiences in Australia	Mixed Methods; survey with write in options	Australia	188	Various transgender identities (110 assigned male at birth, 78 assigned female at birth)	*M* = 44.87 SD = 13.93	Various gender affirming treatments	Likert scales: experiences with HCPs, if patients had to educate HCPs, information provided, describe experiences	5
Speer and McPhillips (2012)[42]	To explore transgender patients experiences of interacting with psychiatrist in a gender identity clinic in order to advance understanding of patient centred communication	Qualitative; interviews	UK	21	Various transgender identities (19 MtF; 2 FtM)	Not specified	Psychiatry	Self-reported experiences	5
van de Grift et al. (2016)[51]	To examine how mastectomy affects body image in a sample of transgender men	Quantitative nonrandomized; survey	The Netherlands	26	Transgender men	18–59 (*M* = 26.1)	Mastectomy	Body Image Scale for Transsexuals, Multidimensional Body-Self Relations Questionnaire, Appearance Schemas Inventory, Situational Inventory of Body Image Dysphoria, Body Image Quality of Life Inventory, Rosenberg Self-Esteem Scale	3
van de Grift et al. (2017a)[57]	To explore how gender affirming healthcare affects gender dysphoria and body satisfaction six years after clinical entry	Quantitative nonrandomized; survey	The Netherlands, Belgium, Germany	201	Various transgender identities (135 AMAB, 66 AFAB)	AMAB *M* (SD): 39.2 (12.9) AFAB *M* (SD): 30.6 (11.3)	Various Gender Affirming Treatments	Utrecht Gender Dysphoria Scale, Body Image Scale for transsexuals, Symptom Checklist-Global Severity Index, Satisfaction With Life Scale, Subjective Happiness Scale, Cantril Ladder	4
van de Grift et al. (2017b)[52]	To assess patient reported outcomes and surgical decision making among a cohort of transgender men undergoing mastectomy	Quantitative nonrandomized; survey	The Netherlands	54	Transgender men	18–59 *M* = 25.8	Mastectomy	Likert (burdensome process, depression, anxiety, femininity/masculinity of chest, complications satisfaction with scars, sensitivity, nipples, shape, symmetry, overall appearance)	4

(*continued*)

Table 1. (Continued)

Authors (year)	Aims	Study design	Country	Sample size	Gender identities	Age	Treatment undergone	Measure of experience	MMAT score
von Vogelsang, Milton, Ericsson, and Stromberg (2016)[46]	To explore how transgender patients experience interactions with healthcare professionals when undergoing gender affirming healthcare	Qualitative; interviews	Sweden	6	Various transgender identities (3 MtF, 3 FtM)	20–36	Various gender affirming procedures	Self-reported experiences	5
Staples et al. (2019)[26]	To investigate body satisfaction and sexual distress according to transition related treatment status	Quantitative	USA	317	Various transgender identities (35 trans women, 74 trans men, 32 genderqueer/gender nonconforming, 176 other)	$M = 28.11$ (SD = 6.94)	Various gender affirming procedures	Modified Female Sexual Distress Scale—Revised (FSDS-R), single item question for body satisfaction, single item questions for transition status	5
Kelly et al. (2019)[48]	To investigate long-term effects and to compare outcomes between cricothyroid approximation (CTA) and glottoplasty	Quantitative	Sweden	24	Transgender women	$M = 45.5$ (SD = 10; range = 27–64)	Voice therapy, cricothyroid approximation, glottoplasty	Questionnaire developed by authors; some questions from the post gender-confirming pitchraising surgery questionnaire from La Trobe University	4
Stein et al. (2020)[37]	To investigate the association between obesity and postoperative patient-reported outcomes	Quantitative	Canada	97	Transgender (not specified)	Obese patients significantly older (mean = 29 years vs mean = 24 years $p < 0.001$)	Mastectomy	BODY Q	3
Brown et al. (2020)[27]	To determine whether the addition of glottoplasty to VT results in greater fundamental frequency elevation and improvement in quality-of-life measures	Quantitative	USA	48	Transgender (not specified)	Voice therapy only: mean age = 35.6; SD = 14.2; voice therapy with glottoplasty: mean age = 35.5; SD = 9.5	Voice therapy, glottoplasty	Trans Woman Voice Questionnaire (TWVQ), and Voice Handicap Index-10 (VHI-10)	4
Bustos et al. (2020)[28]	To describe the nipple split sharing technique during chest wall masculinization surgery comparing surgical, patient-reported outcomes (PRO) and aesthetic results with the conventional technique	Quantitative	USA	34	Transgender (not specified)	Convential technique: median age = 24; novel technique: median age = 27	Mastectomy	Likert and BODY Q	4
Garcia and Crosby (2020)[29]	To describe the social determinants of health that shape access to health services for transgender women in Oregon	Qualitative; interviews	USA	25	Transgender women	$M = 27.56$ (SD = 6.21)	Various gender affirming procedures	Self-reported experiences	5

(*continued*)

Table 1. (Continued)

Authors (year)	Aims	Study design	Country	Sample size	Gender identities	Age	Treatment undergone	Measure of experience	MMAT score
Meyer et al. (2020)[30]	To document and categorize the types of unmet expectations that are common in the TGD patient–health care provider social dynamic in the Central Great Plains of the United States	Qualitative; interviews	USA	27	Various transgender identities (14 trans women, 10 trans men, 3 non-binary)	*M* = 36 (range = 22–64)	Various gender affirming procedures	Self-reported experiences	5
MacKinnon et al. (2020)[38]	To explicate how standardized readiness assessments coordinate access to hormones and surgeries in Canada	Qualitative; interviews	Canada	9	Transgender (not specified)	Not specified	Surgery assessment	Self-reported experiences	5
Harrison, Jacobs, and Parke (2020)[45]	To gain an in-depth understanding of the lived experiences of adults with gender dysphoria seeking treatment in the UK	Qualitative; interviews	UK	8	Various transgender identities (2 trans men, 6 trans women)	*M* = 33 (SD = 12.69, range = 22–60)	Various gender affirming procedures	Self-reported experiences	5
Willis et al. (2020)[43]	To examine supportive and obstructive points of interaction with health-care professionals, and to identify key learning messages for improving trans-related health care from the perspectives of trans-identifying adults in later life	Qualitative; interviews	UK	19	Various transgender identities (15 trans women, 4 trans men)	50–74 years	Various gender affirming procedures	Self-reported experiences	5
Frohard-Dourlent, MacAulay, and Shannon (2020)[39]	To explore transgender patients' experiences of surgery readiness assessments	Qualitative; interviews	Canada	35	Various transgender identities (19 transfeminine, 13 transmasculine, 8 non-binary)	24–69 years	Surgery assessment	Self-reported experiences	5
Hughto et al. (2020)[31]	To examine associations between gender affirmation experiences and self-reported depressive, anxiety, and stress symptoms	Quantitative	USA	288	Various transgender identities (234 trans masculine spectrum; 54 trans feminine spectrum)	*M* = 33 (SD = 13)	Various gender affirming procedures	Adapted measure from Rood et al. 2015,2016;[61,62] Depression, Anxiety, and Stress Scale (DASS-21)	4
McNichols, O'Brien-Coon, and Fischer (2020)[32]	To provide patient-centric insight on self-image and other concerns that arise during surgical transition	Quantitative	USA	246	Transgender men	Not specified	Various surgeries	Questionnaire developed by authors	4
Ker et al. (2020)[53]	To evaluate service users' and health professionals' experiences of a pilot clinic at Mauri Ora (Victoria University of Wellington's Student Health and Counselling Service) that provided gender-affirming hormones through primary care	Qualitative; interviews	New Zealand	4	Various transgender identities (3 female, 1 non-binary/neutrois)	*M* = 20 (range 18–26)	Primary care, HRT	Self-reported experiences	5
Akhoondinasab et al. (2020)[54]	To compare outcomes and satisfaction with a new technique of coronaplasty and the traditional Norfolk method	Quantitative	Iran	40	Transgender (not specified)	Not specified	Phalloplasty	Likert scale	4

(*continued*)

Table 1. (Continued)

Authors (year)	Aims	Study design	Country	Sample size	Gender identities	Age	Treatment undergone	Measure of experience	MMAT score
Bradford, Rider, and Spencer (2019)[33]	To explore associations between hair removal and psychological wellbeing in a transgender sample	Quantitative	USA	281	Various transgender identities (159 trans women, 121 non-binary/ gender queer)	*M* = 31.94 (SD = 11.76; range = 18–68)	Hair removal	Situational Inventory of Body-Image Dysphoria, Short Form (SIBID-S), Positive and Negative Affect Scale (PANAS-X), Generalized Anxiety Disorder 7-Item (GAD-7), Patient Health Questionnaire 8-Item (PHQ-8)	3
Regmi et al. (2019)[56]	To explore how hormones are used, types of hormones used and side effects experienced by transgender women after hormone use in Nepal	Qualitative; focus groups and interviews	Nepal	62	Transgender women	*M* = 23.06 (SD = 3.9)	GAHT	Self-reported experiences	5
Pang, Gutman and deVries (2019)[40]	To explore the concerns and explicit plans for later life care among a transgender sample	Qualitative; focus groups and interviews	Canada	24	Various transgender identities (18 trans women, 6 trans men)	*M* = 70 (range = 55–89)	Various gender affirming procedures	Self-reported experiences	5
Lewis et al. (2019)[34]	To evaluate transgender/gender nonconforming (TGNC) adults' worries and coping actions related to discrimination by healthcare professionals	Quantitative	USA	316	Transgender (not specified)	Median = 27 (range = 18–67)	Various gender affirming procedures	Questionnaire developed by authors; Patient Health Questionnaire-2; Generalized Anxiety Disorder-7 Scale; Everyday Discrimination Scale (Short Form)	3
Neuville et al. (2018)[55]	To assess the safety, feasibility, and patient satisfaction of the ZSI 475 FtM	Quantitative	France	20	Transgender men	*M* = 37.9 (SD = 7.6; range = 26–50)	Phalloplasty	International Index of Erectile Function 5 (IIEF-5), Erectile Dysfunction Inventory of Treatment Satisfaction (EDITS), and Self-Esteem and Relationship (SEAR) Questionnaire	4
Mohamed and Hunter (2018)[44]	To investigate transgender women's experiences and attitudes to HRT, and expectations of what might occur and/or what occurred after they reached "menopausal age."	Mixed Methods	UK	67	Transgender women	*M* = 49.67 (SD = 14.87; range = 20–79)	GAHT	Survey with standardized measure [Beliefs about Medicines Questionnaire (BMQ)] and open questions	5
Friley and Venetis (2021)[35]	To investigate the salient information assessment themes that contribute to transgender patients' decisions to disclose or withhold their gender identity from medical providers	Qualitative; interviews	USA	26	Transgender (not specified)	*M* = 33.96 (SD = 13.38; range = 18–65)	Various gender affirming procedures	Self-reported experiences	5

*Terminology used in original article.

AFAB, assigned female at birth; AMAB, assigned male at birth; BMQ, Beliefs About Medicines Questionnaire; BUT, Body Uneasiness Test; CA, cricothyroid approximation; DASS-21, Depression, Anxiety, and Stress Scale-21; EDITS, Erectile Dysfunction Inventory of Treatment Satisfaction; FSDS-R, Female Sexual Distress Scale—Revised; FtM, female to male; GAD-7, Generalized Anxiety Disorder 7; GAH, gender-affirming health care; GAHT, gender-affirming hormone therapy; HCP, health care professional; HRT; IIEF-5, International Index of Erectile Function 5; MMAT, Mixed Methods Appraisal Tool; MtF, male to female; PANAS, Positive and Negative Affect Scale; PHQ, Patient Health Questionnaire; RSES, Rosenberg Self-Esteem Scale; SEAR, Self-Esteem and Relationship; SIBID-S, Situational Inventory of Body-Image Dysphoria, Short Form; TCS, Transgender Congruence Scale; TGNC, transgender/gender nonconforming; TWVQ, Trans Woman Voice Questionnaire; VHI-10, Voice Handicap Index-10; VT, voice therapy.

Main themes

Using the process of narrative synthesis, four key factors emerged as associates of experiences. These were: sociodemographic factors treatment-related factors, psychological factors, and health care interactions (Table 2).

The role of sociodemographic factors

Sixteen studies investigated the impact of patients' sociodemographic characteristics on their experiences of GAH. Commonly investigated factors included gender identity, age, financial circumstances, and location, among others. Transgender men rated their experiences with HCPs more poorly than transgender women, and nonbinary participants reported specific challenges that they felt were not faced by binary (identifying as male or female) transgender patients[20,35,39,49] For example, participants assigned male at birth (AMAB) rated their experiences with psychiatrists more highly than participants who were assigned female at birth (AFAB).[49]

Similarly, gender identity affected surgery experiences, with participants who were AMAB more likely to report positive experiences of surgery than those who were AFAB.[49] Those undergoing male to female surgeries reported significant improvements in terms of psychiatric support, friends and family support, user organization support, and improved quality of relationships when compared to those undertaking female to male (FtM) surgeries.[41] However, it is important to note that participants in this study were mostly transgender women ($n = 104$), with only a small number of transgender men ($n = 8$), so these results should be interpreted with caution.

Patients who identified outside of the gender binary of male and female often had unique health care experiences shaped by their identity in the studies reviewed. One study[20] found that such patients reported having to reframe their needs in binary terms to access GAH, which was attributed to a lack of HCP knowledge around nonbinary identities. One nonbinary participant explained that their transition involved stopping gender affirming hormone therapy (GAHT) and seeking surgery, which was misinterpreted by an HCP as uncertainty and regret.[39]

Some participants described shame about having to "borrow" the transgender label, with others reporting that they left clinics due to a lack of understanding from HCPs, as well as a lack of nonbinary options on intake forms.[20,35]

However, not all studies that examined the role of gender identity found an effect. For example, one study[57] found that sex assigned at birth was not predictive of body satisfaction, while another[21] found no correlation between gender identity and body uneasiness or quality of life in those undergoing masculinizing mastectomies.

A number of other sociodemographic factors were explored in the studies reviewed. For example, age was associated with mastectomy outcomes in transgender men, with older age, as well as lower body mass index (BMI) and larger breast size, all predicting a greater improvement in body image postoperatively.[51]

However, BMI did not always affect experiences of mastectomy. A different study comparing obese and nonobese patient outcomes of masculinizing mastectomy found no significant difference in BODY Q scores between the two groups.[37] The role of health status was explored by another study, which found that participants with lower self-reported health status reported greater worry about discrimination from primary care practitioners.[34]

Age was briefly explored in some studies, with a participant in one study noting that they were refused GAH when they sought this at the age of 16, because HCPs felt that the patient was too young to be sure of their gender identity.[46] Age also played a role in how older individuals experienced GAH, with some participants in one study reporting concern about "losing time" by seeking gender-affirming care later in life.[43] However, conversely, it is interesting to note that a study comparing scores from the Beliefs About Medicine Questionnaire (BMQ) between two groups—those younger than 50 years and those older than 50 years—found no significant difference in GAHT necessity between the two groups.[44]

Some of the most prominent sociodemographic factors found to impact on experiences were those relating to finances and location. These were often interlinked—specifically, where individuals lived often impacted the available treatment options and whether they had to travel for health care—something which involved additional costs. For example, one study found how those living in Wales had to be referred to a gender identity clinic in England, resulting in a long and costly commute, which participants reported as an additional barrier.[43]

Meanwhile, those in Oregon, USA, reported that they required two assessments to be referred for gender-affirming surgery.[29] In addition to the cost of the assessments, many patients face additional travel costs, as there are a limited number of HCPs who can conduct these assessments, with participants in

Table 2. Systematic Review Findings

Theme	Specific factor	Studies finding an effect	Studies not finding an effect
The role of sociodemographic factors	Gender identity/assigned sex at birth	• Likelihood to have undergone surgery differed by assigned sex at birth, with AMAB more likely to have undergone surgery than AFAB participants[49] • Sex assigned at birth affected how patients perceived experiences: AFAB patients rated experiences with HCPs more poorly than AMAB patients[49] • Nonbinary patients reported specific barriers that they felt were not experienced by binary patients[20] • Trans women reported significant improvements in support and relationship quality following surgeries, while trans men did not[41] • Nonbinary participants often had to present as binary men or women due to "one narrative of what a trans person looks like"[35] • One participant discontinued HRT and pursued surgery due to their nonbinary identity—this was misinterpreted as uncertainty and regret by HCPs[39]	• One study found that assigned sex was not predictive of body satisfaction[57] • No correlation between gender identity and BUT-A GS and BREAST-Q scores[21]
	Age	• One participant recalled being refused GAH when 16 years old due to HCPs feeling that they were too young to be sure of their gender identity[46] • Older age predicted greater improvements in body image postmastectomy in transgender men[51] • Patients who underwent surgery before 30 years of age reported significant satisfaction[41] • Older participants concerned about "losing time" due to age[43]	• Age was not predictive of body satisfaction[57] • No correlation between age and BUT-A GS and BREAST-Q scores[21] • BMQ found high necessity of HRT in both older and younger than 50 age groups[44]
	Financial/economic factors	• One HCP "did not agree" with HRT being funded by NHS and would only prescribe if the patient was willing to pay[43] • While some insurance companies cover GAH, not all do[29] • Some patients have to travel if surgery is not available locally, which can result in additional costs[29] • Participants seeking surgery discussed how requiring two assessments to access this was not accessible to all due to the costs[39] • In a sample of 246 transgender men, only 1.5% underwent phalloplasty. When the rest of the sample were asked the reasons for not seeking this surgery, 53% reported cost as a barrier to undergoing this surgery[32] • Of those who reported barriers to accessing hair removal, 95% reported financial barriers[33] • One participant felt that their experience was positive due to seeking health care privately[45]	
	Location	• Those living in "bible-belt" areas of America expressed concern about whether HCPs would treat transgender patients, one participant advised that "prayer would heal" them[35] • Oregon viewed as a good option for GAH due to informed consent model and insurance coverage of GAH, with many moving to Oregon for this reason[29] • Some negatives in Oregon, however—"understaffed" clinics, 2-year wait for genital surgery[29] • Welsh system viewed as an extra step—patients had to be referred to English gender clinic[43] • Those requiring assessments for surgery reported that location played a role here—there were only a limited number of assessors in rural areas, with most located only in major urban areas[39] • 15% of sample of transgender men not seeking phalloplasty reported that the distance to receive this surgery was too far to travel[32] • Those living in Wales had to travel to England to attend a gender clinic, resulting in additional costs due to transport[43]	
	Health status and other health-related factors	• Lower BMI and larger breast size predicted greater improvements in body image after mastectomy in trans men.[51] Lower self-reported health status associated with greater worry about discrimination from primary care practitioners[34]	• No significant correlation between sexual orientation, education level, employment status, or income and BUT-A GSI and BREAST-Q scores[21] • Study comparing obese and nonobese patient outcomes of masculinizing mastectomy found no significant difference in BODY Q scores between obese and nonobese group[37]

(*continued*)

Table 2. (Continued)

Theme	Specific factor	Studies finding an effect	Studies not finding an effect
The role of treatment-related factors	Complications	• Patients who did not experience any long-term surgical complications reported significantly improved quality of life, self-esteem, feelings of completeness, improved intimate relationships, and improved work life[41] • Only 1.5% of a sample of trans men had undergone phalloplasty—59% reported fear of complications as a reason for not seeking this surgery[32]	N/A
	Number of procedures	• Those who had undergone more treatments had lower anxiety and depression and higher comfort with one's body[22] • Proportion of low TCS scores was almost four times higher in the "no-treatment" category compared with the "HRT and definitive bottom surgery" category[22] • Depression and anxiety were higher in no/few treatment groups[22] • Body-gender congruence and body image satisfaction were higher in groups with more treatments[22] • Number of treatments undergone was significantly inversely associated with depressive and anxiety and stress symptoms[31] • Number of hair removal sessions significantly correlated with satisfaction[33]	N/A
	Type of procedure	• One study explored mastectomy in transgender men by comparing concentric circular method and inframammary skin resection with free nipple grafts and found that the inframammary skin resection with free nipple grafts group was significantly more satisfied on most aspects of the chest compared with the concentric circular group[52] • Study comparing CA and GP found that those who underwent CA rated their voice as "rough or hoarse in general," significantly higher than those who underwent glottoplasty[48] • Those who underwent glottoplasty had significant increases in being perceived as female and satisfaction with voice from baseline to postsurgery, while those who underwent CA did not[48] • Study comparing VT only with VT and glottoplasty found that, while both groups had a significant increase in VHI-10 scores, only those who had undergone glottoplasty had a significant increase in TWVQ scores[27] • In addition to this, the group that also underwent glottoplasty had a significantly greater improvement in TWVQ and VHI-10 scores compared with those who had only VT[27] • Patients who later underwent glottoplasty had significantly worse VHI-10 scores compared to those who did not undergo glottoplasty[27] • Study comparing split sharing method of nipple grafting in masculinizing mastectomy with traditional method found that patients who underwent split sharing method had significantly higher scores for the nipple module of the BODY Q scale than those who underwent the traditional method, while scores for the chest module of the BODY Q did not differ[28] • In a study comparing a novel technique of coronaplasty for phalloplasty with the traditional technique, patients who had undergone novel technique rated their results as significantly more acceptable than those who underwent traditional Norfolk technique[54] • 75% of patients who previously had a different erectile prosthesis and later had ZSI 475 FtM prosthesis reported that the ZSI 475 FtM was "better" or "a lot better" than their previous prosthesis-reported reasons included: better stability, harder glans, and reduced inopportune deflation[55] • Those who had received HRT had significantly higher body satisfaction than those who wanted to receive this treatment. The same was true for those who had undergone surgery[26]	N/A
	Time since treatment	• There was a significant positive correlation between body satisfaction and time since transition[26]	N/A

(*continued*)

Table 2. (Continued)

Theme	Specific factor	Studies finding an effect	Studies not finding an effect
The role of psychological factors	Mental well-being	• Trans men with pre-existing mental health conditions had on average poorer body image before undergoing mastectomy and a greater improvement in body image from presurgery to postsurgery[21] • Those with higher levels of anxiety had significantly higher levels of worry about discrimination from a range of HCPs (pharmacists, primary care practitioners, and transgender health specialists) than those with lower levels of anxiety[34] • Some participants reported struggle of balancing communicating distress of gender dysphoria with not wanting to be seen as too distressed for treatment[38] • One participant felt that HCPs did not think she was ready for surgery as she was experiencing suicidal ideation—had to insist that she was receiving therapy for this[38] • One HCP skeptical of patient's identity because she "did not look suicidal"[43]	N/A
The role of health care interactions	Positive interactions	• Participants liked HCPs who were "friendly" and "relaxed," and answered their questions[42] • Participants appreciated when their chosen name was used by HCPs[36] • Participants reported liking HCPs who were "knowledgeable" and "caring"[49] • Participants appreciated when the rationale behind assessments was explained, being treated as individuals, being listened to, having privacy during HCP interactions, being put at ease when they were nervous, not having surgeries delayed, and not having their lifestyles overly questioned[46] • HCPs occasionally took steps to create a more positive experience for patients, such as asking how they would like to be referred as[46] • Moderate positive relationships were found between mental well-being and (1) feeling comfortable with GPs, and (2) feeling respected by GPs[49] • Despite lack of knowledge, many HCPs willing to learn about transgender issues and health care—viewed as positive[30,43] • One participant initially did not trust HCPs due to a negative experience of surgery in the past, but having a positive experience with an HCP regained his trust in HCPs[43] • Assessments sometimes viewed as helpful spaces to discuss risks and benefits of treatment[39] • Positive when identity validated by HCP for nonbinary participant[39]	Satisfaction with standards of care and satisfaction with HCPs not correlated with STT, TCS, RSES, or DASS-21[50]

(*continued*)

Table 2. (Continued)

Theme	Specific factor	Studies finding an effect	Studies not finding an effect
	Negative interactions	• Participants perceived experiences where HCPs used the incorrect name or pronouns as negative[30,36] • Participants disliked HCPs who were "rude," "aggressive," and rushed patients[42] • Participants disliked being referred to by the incorrect name and pronouns, being asked irrelevant questions, and not having the rationale for assessments explained to them[46] • One lesbian transgender woman disliked being asked "wouldn't it be easier if you continued to be a guy?" by an HCP[46] • One participant's trans status was brought up by an HCP when the participant felt this was not relevant as they had sought care for asthma[24] • Participants reported negative experiences with HCPs who would use the incorrect pronouns when speaking to patients and reported seeking specific HCPs that they knew were supportive of transgender patients[58] • One individual had sought care from 42 HCPs before finding one willing to treat him[40] • Inappropriate and irrelevant questions from HCPs reported in various studies[30,39] • Having to "out" oneself (e.g., trans woman explaining why she does not have periods) or being outed (e.g., HCP loudly discussing name change) viewed as negative[30] • Patients were made to show body parts when not relevant[30] • Participants reported that HCPs did not explain the available treatment options to them[45] • Participants felt that gender clinics did not offer support for mental health, despite gender dysphoria and waiting times causing distress[45] • One nurse "difficult" with patient after they had surgery[43] • Two assessments seen as excessive[39] • Assessors seen as less knowledgeable than regular HCP as they spend less time with patient[39] • Process of assessment seen as complicated, lack of information on how to navigate this process[39] • Reluctance to engage with HCPs—"rather die than go for a check up"[56] • HCPs often assumed mental and physical health issues were related to being transgender or HRT[35] • Participant reported overhearing HCPs discussing his transgender identity and laughing[30]	N/A
	Feeling dependent on HCPs	• Participants reported feeling dependent on HCPs, leading three participants to avoid seeking care[47] • One participant explained that a support group would provide a "script" of what to say to HCPs to receive treatment and would conduct practice interviews before appointments[36] • Assessments viewed as "gatekeeping"—HCPs deciding whether or not patient can access treatment[39] • One participant questioned by HCPs because her chosen name was not "feminine enough"[43] • Participant reported being criticized for not trying hard enough to "pass" as female[42] • Participants disliked HCPs who were "gatekeeping" and "asked ridiculous or offensive questions"[49] • Participants reported feeling pressure to present in a certain way to access treatment or avoid having treatment revoked[46,36]	

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Table 2. (Continued)

Theme	Specific factor	Studies finding an effect	Studies not finding an effect
	Lack of knowledge	• Patients reported self-medicating due to a lack of knowledge among HCPs[23] • Patients felt that HCPs lacked knowledge around specific issues such as pregnancy in transgender men and often turned to the internet and other transgender people for information and support[47] • Participants often reported turning to support groups for information instead of HCPs due to a lack of knowledge among HCPs[20,24,36] • Participants sometimes hesitant to seek care after hearing about negative experiences of other transgender people[24] • Patients occasionally avoided preventative care due to previous instances where there was a lack of knowledge among HCPs[36] • Patients reported struggling to find information on silicone injection safety[24] • Participants reported a lack of knowledge among HCPs[36,44] • Patients had to educate HCPs[29,43] • One patient was given incorrect dose of HRT and had to seek care elsewhere[29] • One participant attended five sessions with a therapist who could not diagnose her with gender dysphoria and had to seek care elsewhere[29] • No transgender specialist in Nepal—patients often relied on friends and the internet for information on GAH[56] • 52.5% viewed pharmacists as having little/no competency in providing GAH[34] • 40.4% viewed primary care practitioners as having little/no competency in providing GAH[34] • 1.5% viewed transgender specialists as having little/no competency in providing GAH[34] • Educating HCPs viewed as "exhausting" and "frustrating"[36] • 71.2% of sample reported having educated an HCP about transgender health care needs[34] • HCPs often willing to learn about transgender health care needs[36] • One patient reported that his GP did not know about funding options for surgery and did not research this for him[43]	N/A
	Waiting times	• Less waiting times for primary care viewed as a positive[53] • One patient reported having waited 4 years at the time of the study and explained that this had a negative effect on her mental health[45] • Participants reported frustration at the lack of communication from gender clinics about waiting times and were concerned that they would be forgotten about[39,45] • Patients reported being made to wait unnecessarily long periods for hormones or surgery to be "sure" of their decision, and were sometimes given lower doses to begin with[30] • Patients were made to wait unnecessarily or given lower doses of HRT[30]	
	Concerns/fears regarding health care interactions	• Participants described the process of being assessed for surgery as "nerve wracking" and "panic inducing" and reported a fear of being denied for surgery[39] Participants reported feeling like they had to fit a "script" of what HCPs "wanted to hear" and often omitted certain details[39] • Participants often felt like they could not be honest with HCPs[38,39] • One participant was questioned by HCPs because her name was not viewed as "feminine enough"[43] • Participants feared that expressing any uncertainty about their identity would prevent them from receiving gender-affirming healthcare[38] • Of those reporting barriers to accessing hair removal services, 36% reported anxiety/fear around seeking this service[33] • 41.6% reported some/a lot of worry about discrimination from pharmacists[34] • 54.6% reported some/a lot of worry about discrimination from primary care practitioners[34] • 11.8% reported some/a lot of worry about discrimination from transgender specialists[34]	

(*continued*)

Table 2. (Continued)

Theme	Specific factor	Studies finding an effect	Studies not finding an effect
	Health care settings	• Transgender women who had been incarcerated in male prisons experienced difficulties accessing GAHT in prison, as the prison required documentation that stated the patient had been on GAHT before being incarcerated. This was a barrier for those who had been self-medicating as well as one participant who did not have paperwork to show this due to homelessness[58] • Participants also reported that they were given lower doses of GAHT than they required[58] • Incarcerated participants often stopped taking GAHT to avoid having to be openly transgender in prison to avoid discrimination[58] • One study found that experiences of surgery differed between private and public settings, with those who had surgery in private settings reporting significantly more surgical and nursing support, as well as significantly higher quality of life than those who had surgery in public settings[41] • One study explored satisfaction with different HCPs and found that psychiatrists were rated the lowest (lower than psychologists, GPs, and surgeons)[50] • Participants did not feel represented in health care literature[24] • Positive experiences reported when signposts of support for LGBT patients in clinic[30] • One study of a pilot HRT clinic in a primary care setting found that patients preferred this setting as it was "familiar" and they had already established a relationship with the HCPs[53] • Hospitals seen as "intimidating" and "bigger deal" than primary care setting[53] • Hospital viewed as "gatekeeping," while staff in primary care setting viewed as "supporters"[53] • GPs preferred for endocrinologists to manage patient HRT prescriptions[43]	N/A

BMI, body mass index; GS, gender spectrum; GSI, Global Severity Index; NHS, National Health Service; STT, Global Severity Index, Steps to Transition Scale.

another U.S.-based study noting that most qualified HCPs are located in urban areas, creating an additional barrier for those living in more rural areas.[39] Often, patients have to travel to different states to have surgery, which is another financial barrier.[29]

In 1 sample of 246 transgender men, only 1.5% had undergone phalloplasty.[32] When those who had not undergone this surgery were asked the reasons for this, 53% reported that cost was a barrier, while 15% reported that having to travel long distances to access the surgery was a barrier.[32]

Meanwhile, a study exploring hair removal treatments among transgender women and nonbinary individuals found that of those reporting barriers to this treatment, 95% attributed this to the cost involved.[33] In one study, a participant reported that their HCP "did not agree" with GAHT being funded by the NHS and would only prescribe hormones if the patient was willing to pay for the prescription themselves.[43] In another study, a patient reported having a positive experience of seeking gender-affirming care and noted that this was likely due to seeking care privately.[45]

While many transgender individuals have their treatments covered by insurance, not all insurance companies cover these treatments, which can act as a barrier to those seeking GAH.[29] Some individuals moved to areas where treatment was more accessible, such as Oregon in the USA, where there is an informed consent model of gender-affirming care, as well as a number of insurance companies that cover gender-affirming treatments.[29] However, some individuals noted that even areas like Oregon had their own issues, such as understaffed clinics and long waiting times for genital surgery.[29]

Occasionally, the culture of different locations played a role in how transgender patients experienced health care. For example, those living in the "bible belt" of the USA expressed concern about how HCPs would treat them, with one individual reporting that their HCP advised them that prayer would heal their gender dysphoria.[35] Taken together, these studies highlight the potential inequalities faced by transgender people living in different locations, with those having less financial resources being particularly disadvantaged.

The role of treatment-related factors

Twelve studies revealed how experiences differed depending on the type or number of treatments received. For example, researchers in one study[22] split transgender participants up into five categories according to their treatment history: (i) no gender-affirming treatment to date, (ii) GAHT only, (iii) GAHT and top surgery, (iv) GAHT and partial bottom surgery, and (v) GAHT and definitive bottom surgery. They found that patients undergoing each stage had generally higher comfort with one's body, lower anxiety, and lower depression, implying that a greater engagement in GAH led to more positive experiences.[22]

Similarly, another study found that the number of gender-affirming treatments a patient had undergone was significantly inversely associated with depression, anxiety, and stress symptoms.[31] Meanwhile a study exploring hair removal found that the number of hair removal sessions undergone was significantly correlated with satisfaction.[33]

In another study, the authors found that those who had received GAHT had significantly higher body satisfaction compared to those who wanted to receive this treatment.[26] The same was also true for those who had undergone surgery compared with those who wanted to have surgery.[26] The findings of these studies suggest that availing of multiple gender-affirming treatments results in more positive outcomes. Patient experience also varied by surgical technique. For example, in one study exploring mastectomy outcomes among transgender men, those who underwent concentric circular mastectomy were less satisfied that those who underwent inframammary skin resections with free nipple grafts.[52]

Meanwhile, another study compared two groups undergoing double incision mastectomy with free nipple grafts, but one group underwent the traditional method of nipple grafting, while the other underwent a split sharing method of nipple grafting.[28] The authors found that those who underwent the split sharing method had significantly higher scores for the nipple module of the BODY Q scale compared with those who underwent the traditional method, while the chest module BODY Q scores did not differ between the two groups.[28]

Another study compared the traditional Norfolk method of coronoplasty for phalloplasty with a novel technique and found that patients who had undergone the novel technique of coronoplasty rated their results as significantly more acceptable than those who underwent the traditional technique[54]

Similarly to the studies comparing traditional and novel surgery methods, one study explored transgender men's experiences of the ZSI 475 FtM erectile prosthesis.[55] As those electing for an erectile prosthesis after phalloplasty often need to have this replaced after a number of years, several participants had previously had a different erectile prosthesis before the ZSI 475

FtM. Seventy-five percent of participants who had previously had a different prosthesis reported that that the ZSI 475 FtM was "better" or "a lot better" than their previous prosthesis, citing reasons such as better stability of the prosthesis, a harder glans, and reduced inopportune deflation.[55]

Two studies in the review compared methods of voice feminization. One compared patients who underwent cricothyroid approximation with patients who underwent glottoplasty.[48] The authors found that those who underwent glottoplasty experienced significant increases in being perceived as female, as well as significantly higher satisfaction with voice from baseline to postsurgery, whereas those who underwent cricothyroid approximation did not experience either of these.[48] In addition to this, those who underwent cricothyroid approximation rated their voice as "rough or hoarse in general," significantly higher than those who underwent glottoplasty.[48]

Another study compared voice therapy alone with voice therapy and glottoplasty, and found that, while both groups had a significant increase in Voice Handicap Index-10 (VHI-10) scores, only those who had also undergone glottoplasty had a significant increase in Trans Woman Voice Questionnaire (TWVQ) scores.[27] In addition to this, the group that also underwent glottoplasty had a significantly greater improvement in TWVQ and VHI-10 scores compared with those who had only had voice therapy.[27]

The findings from both studies suggest that glottoplasty offers the best outcomes for transgender women and nonbinary people seeking gender-affirming voice treatments. It is interesting to note, however, that in the study exploring glottoplasty and voice therapy, those who later underwent glottoplasty had significantly worse VHI-10 scores compared to those who did not undergo glottoplasty.[27]

Surgical complications also appear to impact patient well-being, with patients who did not experience any long-term surgical complications reporting significantly improved quality of life, improved self-esteem, feelings of completeness, improved intimate relationships, and improved work-life balance.[41] This may be because concentric circular mastectomies more frequently required secondary corrective surgeries, which may have led to more negative patient experiences.[52]

Expectations of complications may also affect decisions around what treatments patients seek. In a sample of trans men, 59% of those who had not undergone phalloplasty reported that fear of complications was one reason for not seeking this surgery.[32] While the above studies investigated experiences of undergoing regulated treatments, one study in the review explored experiences of transgender individuals undergoing unsupervised silicone injections and found that patients often reported side effects, including liver and kidney damage, skin infections, and abscesses, suggesting that such treatments lead to more negative experiences.[23]

The role of psychological factors

Psychological factors were found to predict treatment experiences in just four studies reviewed. In a study[21] on mastectomy outcomes for transgender men, researchers found that, while overall body image significantly improved after mastectomy, participants with pre-existing mental health conditions had a poorer body image before undergoing surgery, and a greater improvement in body image from presurgery to postsurgery. Conversely, a study[57] on various gender-affirming treatments found that high body dissatisfaction at clinical admission predicted consistent body dissatisfaction and lower psychological functioning at follow-up.

Psychological factors also influenced interactions with HCPs. For example, those with higher levels of anxiety reported significantly higher levels of worry about discrimination from a range of HCPs including pharmacists, primary care practitioners, and transgender health specialists.[34] Similarly, mental well-being was associated with experiences with general practitioners (GPs), with moderate positive relationships emerging between mental well-being and (i) feeling greater comfort with GPs and (ii) feeling respected by GPs.[49]

Meanwhile, participants in another study discussed the struggle of balancing communicating the distress of gender dysphoria with not wanting to be perceived as too distressed to receive treatment.[38] One participant reported feeling that HCPs did not think she was ready for surgery as she was experiencing suicidal ideation, and had to insist that she was receiving therapy for this to access surgery.[38] Meanwhile, in another study, one participant reported that an HCP was skeptical of her identity and gender dysphoria because the patient "did not look suicidal."[43]

The findings of these studies suggest that it is important to ensure that the mental health of those undergoing GAH is monitored and that patients are provided with adequate mental health support as they undergo medical transition.

The role of health care interactions

The most commonly investigated set of factors in the review were health care interactions, which were explored in 22 studies. These are discussed according to a number of different subcategories below.

Positive interactions

Several studies explored aspects of HCP interactions that patients felt were positive. For example, patients noted that they appreciated when their chosen name and correct pronouns were used by HCPs and receptionists in primary care centers.[36] HCPs sometimes took steps to promote a positive experience among their transgender patients, such as asking patients how they preferred to be referred to.[46]

Patients used various words to describe the HCPs who they felt they had positive relationships with, including "friendly," "relaxed," "professional," "knowledgeable," "humane," and "caring.[42,49] The importance of communication was highlighted in several studies, with participants explaining that they appreciated when HCPs listened to them, allowed them to talk about aspects of their life separate from their transition, explained why assessments were conducted, and answered questions.[42,46]

Other aspects of HCP interactions that participants felt were positive included when HCPs put nervous patients at ease, validated nonbinary gender identities, ensured patience privacy and did not delay access to surgery.[39,42,46]

The importance of HCP interactions could particularly be seen in one study, where one participant discussed how he initially did not trust HCPs due to a past negative experience, but regained his trust following a positive experience with another HCP.[43] Furthermore, despite assessments being seen as a primarily negative aspect of GAH, some patients viewed them as helpful spaces to discuss the risks and benefits of treatment.[39]

Negative interactions

Despite these positive experiences, negative experiences were more prevalent throughout the studies reviewed. When describing HCPs whom they had negative interactions with, participants used words such as "aggressive" and "dismissive."[42] Negative interactions were frequently reported as the opposite of positive interactions, such as HCPs who used the incorrect name or pronouns to refer to patients, rushing patients, not explaining the rationale behind assessments, and not taking the time to answer questions.[30,36,42,46]

Participants also disliked HCPs whom they perceived as "gatekeeping" treatment, who made patients wait longer or take lower doses of HRT, who made patients show parts of their bodies when not relevant, and who they felt asked "ridiculous or offensive" questions during assessments.[30,36,39,42,49] Further examples of specific negative experiences are provided below.

Dependence on HCPs

Participants across the various studies frequently discussed the idea of feeling dependent on HCPs.[46,47] Patients perceived HCPs deciding whether they could access care negatively and felt that assessments were a way of "gatekeeping" health care, with HCPs who required two assessments seen as excessive.[39]

Patients often felt like they had to present a certain way to access GAH, such as wearing certain clothes to appease HCPs, often fearing that treatment would be revoked if they did not present in a way that they thought HCPs approved of.[36,42,46] In some cases, patients were criticized if HCPs felt they did not try hard enough to "pass" as the gender they identified as, or in one case when a patient's chosen name was not seen as feminine enough.[42,43]

Participants also felt a need to provide a specific narrative to HCPs, and often sought advice on what to say from support groups who would provide a "script" of what to say and hold practice interviews.[36] Feeling dependent on HCPs had implications for how patients engaged with health services, with three participants in one study noting that although they had considered seeking GAH, they decided not to pursue this partially due to feelings of dependence on HCPs.[47]

Lack of knowledge among HCPs

Another prevalent issue across various studies was a lack of knowledge about transgender people and GAH among HCPs.[30,36,44,46] Examples of this included ignorance surrounding transgender identities, such as one lesbian transgender woman who was asked "wouldn't it be easier if you continued to be a guy?,"[46] a lack of knowledge about funding options for surgery,[43] specific issues such as pregnancy among transgender men,[47] and even sometimes around treatments themselves, with one patient reporting that they were given the incorrect dose of GAHT and had to seek care elsewhere.[29]

Some patients turned to self-medication due to a lack of knowledge among HCPs,[23] while others sought information about GAH online and from support groups.[20,24,36,44,47] One study found that because

there are no transgender specialists in Nepal, patients often relied on friends and the internet for information about GAH.[56]

Sometimes, information from others impacted patient expectations of HCP interactions, with some participants in one study mentioning that they felt hesitant to seek care due to hearing about other peoples' negative experiences of HCP interactions.[24] Participants in another study reported avoiding health care due to a lack of transgender specialists, with one stating that they would "rather die than go for a check-up."[56]

Seeking knowledge elsewhere also came with challenges. Information was not always readily available on some topics. For example, the process of assessment was viewed as complicated, with patients reporting that there is a lack of information around how to navigate this process.[39] Meanwhile, those self-medicating struggled to find information about safer methods of injecting silicone.[24] They also noted that HCPs were sometimes critical of self-medication, which they perceived negatively.[42]

HCPs themselves did not always provide detailed information, with participants of one study reporting that HCPs did not explain the available treatment options to them.[45] Despite a general lack of knowledge among HCPs, many were happy to be educated and learn about transgender issues, which was seen as a positive by patients.[30,43] Much of this education came from patients themselves, with 71.2% of one sample reporting having educated an HCP on transgender health care[34] and several other studies finding this to be a common theme.[29,36,43] Participants in one study described having to educate their HCPs on their health needs as "exhausting" and "frustrating."[36]

Participants perceived different HCPs as having differing levels of competency when it came to providing gender-affirming care. One study found that 52.5% of the sample viewed pharmacists as having little/no competency in providing gender-affirming care and 40.4% viewed primary care practitioners as having little/no competency in providing gender-affirming care, with only 1.5% viewing transgender specialists as having little/no competency in providing gender-affirming care.[34]

While it is promising that this percentage decreases for those working more directly with transgender patients, it is interesting to note another study found that, while assessors play a role in determining access to surgeries, patients felt that these HCPs were less knowledgeable than their regular HCPs and less competent in determining eligibility for surgery as they spend less time with each patient.[39] In one case, a patient attended five sessions with a therapist who could not diagnose her with gender dysphoria and had to seek care elsewhere.[29] In another study, 1 individual had sought care from 42 HCPs before he found one who was willing to treat him.[40]

Disclosing one's transgender identity often shaped interactions with HCPs. This was not always a choice made by the patient. One transgender woman often had to "out" herself at regular doctors' appointments by explaining that she does not have periods.[30]

Another patient was effectively "outed" by their HCP who loudly discussed their name change, while other patients in the waiting room could hear the conversation.[30] Sometimes, HCPs did not keep this information private, for example, one case where a patient reported overhearing a, HCP discussing his transgender identity with a colleague and laughing.[30]

HCPs who knew of patients' transgender identities also often assumed that any mental or physical health issue was related to the patient being transgender or receiving GAHT.[35] In one case, a patient's transgender identity was brought up unnecessarily during an appointment for asthma.[24] HCPs sometimes changed how they interacted with patients as they underwent GAH, with one patient reporting that a nurse they had previously attended became "difficult" with them once they had undergone surgery.[43]

Despite the above, not all studies found interactions with HCPs to affect mental well-being. For example, one study[50] found that satisfaction with HCPs and the Standards of Care were not correlated with the Steps to Transition Scale (STT), Transgender Congruence Scale (TCS), Rosenberg Self-Esteem Scale (RSES), or the 21-item short-form version of the Depression, Anxiety, and Stress Scale (DASS-21).[60]

Waiting times

Waiting times emerged as a barrier to care in four studies. HCPs often made patients wait long periods before starting GAHT or undergoing surgery in order for patients to be sure of their identity, and sometimes started them on lower doses of GAHT at the beginning, with many patients reporting that they felt the waiting times were unnecessary.[30] One patient reported that she had been waiting for 4 years to access GAH at the time of the study and explained that the wait had had a negative effect on her mental health.[45] Participants in this study felt that gender clinics did not offer mental health supports to those waiting to receive treatment, despite the wait and gender dysphoria causing patients distress.[45]

Participants reported frustration at the lack of communication from gender clinics in relation to waiting times and expressed concern that they would be forgotten about on the waiting lists.[39,45] One study ran a pilot clinic in a primary care center offering GAHT to transgender patients, and one of the factors that patients reported as a benefit of this was the shorter waiting times for the clinic as opposed to hospitals.[53]

Concerns/fears regarding health care interactions

In addition to experiences of health care interactions, some studies explored expectations of these, with many finding that participants often had specific concerns or fears regarding health care interactions. Often these concerns were related to fear of discrimination. For example, of those reporting barriers to accessing hair removal services, 36% reported anxiety/fear around seeking this service.[33] Meanwhile, another study assessed concern about discrimination from various types of HCPs. This study found that 41.6% of the sample reported some/a lot of worry about discrimination from pharmacists, 54.6% reported some/a lot of worry about discrimination from primary care practitioners, and 11.8% reported some/a lot of worry about discrimination from transgender specialists.[34]

Anxiety around being assessed for treatment by HCPs was also prevalent across a number of studies, with participants of one study describing the process of assessment as "nerve wracking" and "panic inducing," and reported a fear of being denied for surgery.[39] They also reported feeling as though they had to fit a "script" of what HCPs "wanted to hear" to be approved for surgery, often omitting certain details and feeling that they could not be honest with HCPs.[38,39] Participants also feared that expressing any uncertainty about their identity would prevent them from receiving GAH.[38]

Health care settings

Finally, a number of studies in the review found that health care settings also played a role in shaping experiences. A study[58] exploring the experiences of transgender women who had been incarcerated in male prisons found many of these participants reported negative experiences. One of the most frequently cited issues was a difficulty accessing GAHT, with some participants reporting difficulty providing documentation to show that they had previously been on GAHT, and others reporting that they were given lower doses of GAHT in prison.

Some participants also reported negative experiences with prison HCPs, such as one participant who was frequently misgendered by a mental health counselor and compared the experience as similar to conversion therapy, as well as another participant who was told by a nurse "you're not a girl, you're a he."[58] To navigate health care in prison, participants would often go to specific HCPs who they knew were supportive of transgender patients.[58]

Another study[41] found significant differences between those who had surgery in private and public settings, with private settings associated with significantly more surgical and nursing support as well as significantly higher quality of life than in public settings. One study exploring satisfaction with HCPs involved in delivering GAH found that patient satisfaction with psychiatrists was lower than patient satisfaction with other HCPs, including psychologists, GPs, and surgeons.[50] The reason for this was not explored; however, as much of the above negative experiences center around the assessment process with psychiatrists, it could be the case that these HCPs are perceived more negatively by transgender patients because of their role in this process.

Participants felt that signposts of support for LGBT patients in clinics created a positive experience.[30] Meanwhile, another study found that patients preferred to receive GAHT in a primary care clinic as this setting was "familiar" and they had already established a relationship with the HCPs there.[53] The participants in this study felt that the hospital was "intimidating" and a "bigger deal" than primary care settings and felt that staff in the hospital were "gatekeeping" rather than "supporters" like the staff in the primary care center.[53]

Discussion

This review aimed to explore the factors that influence patient experiences of GAH. The studies reviewed explored a range of different influences on these experiences, with findings also highlighting the complex processes involved in receiving GAH. There was strong evidence to suggest the role of interactions with HCPs as determinants of both positive and negative experience, with some suggesting that sociodemographic factors may also influence this.

Only a handful of studies explored the roles of treatment type and psychological factors on patient experience, suggesting that further study on these themes is required to draw more fulsome conclusions. Taken

together, these findings could be informative for those aiming to improve health care experiences and outcomes for transgender patients.

The finding that demographics may play a role in how patients experience GAH suggests that identifying as transgender is not the only factor to influence experiences of GAH. Differing demographics of transgender patients have unique needs, such as nonbinary patients who report that their identities are often erased in GAH settings. Differences in how transgender men and women rated their satisfaction with psychiatrists also illustrate how gender identity affects experiences of health care.[20,49]

Those from ethnic minorities may also be at risk of negative experiences,[23] although less research has examined this to date. Treatment also appeared to differ depending on gender identity, with one study[57] finding that most transgender women underwent genital surgery and most transgender men underwent chest surgery. This may influence the experiences of patients, as more invasive surgeries may lead to different satisfaction rates or changes in body image. As one study[22] found that those undergoing more forms of treatment tend to report positive outcomes, the number of treatments undergone may also play a role in satisfaction.

Financial factors also shaped health care experiences, with cost acting as a barrier in some cases,[32,33] and additional costs arising in some instances, such as in the form of travel costs for those living in rural areas, as well as having to pay for assessments to access surgery.[39,43,44] However, not all studies that investigated the role of sociodemographic factors found an effect, suggesting that there are other factors at play in determining patient experience.

Psychological factors emerged as possible influences on outcomes and experiences in three of the studies reviewed.[21,49,57] This suggests that it may be worthwhile for HCPs to assess patients' mental well-being before they undergo treatment to manage expectations of treatment. For example, as experiences differed depending on the type of procedure participants underwent, it may be important for HCPs to inform their patients of complication and satisfaction rates for each procedure to manage expectations and involve the patient in the decision-making process.[22,41,52]

A clear finding from the review is that interactions with HCPs strongly influenced whether patients perceived their experiences of GAH as positive or negative, with specific actions taken by HCPs linked to patient experience in a number of studies.[41,46,49,58] Actions viewed in a positive way, such as affirming patients' gender identity through the correct use of names and pronouns, could be used to inform the development of guidelines for HCPs working with transgender individuals undergoing GAH.

Lack of knowledge among HCPs also emerged as a theme to negatively impact patient experience, which is in line with the findings of a previous review,[2] suggesting that this is a wider problem for transgender patients in health care settings. However, it is significant and perhaps surprising that lack of knowledge about transgender identities emerged as a theme among those providing health care specifically for transgender patients. This implies that such HCPs need to be better informed regarding transgender issues and consider the impact that this has on their patients. Many participants in the studies reviewed reported turning to the internet and other transgender people as information sources when their HCPs could not provide this.[20,24,36,47]

It is clear from our review that there are a number of things that HCPs can do to provide better care for these patients. Aside from a clear need to promote a positive and nonjudgmental environment during consultations, enhanced education for HCPs will better prepare them to provide information to their patients undergoing GAH.

Limitations

One limitation with this review was that it focused only on published material and could have missed differing perspectives from nonpublished material such as nonpeer-reviewed reports, including dissertations or conference abstracts. Although the quality of included studies was high, many of the studies were investigated in the USA and may not be generalizable to other contexts. In addition to this, different countries differ in their treatment pathways and options for GAH. Search terms could also have failed to include all available literature. Also, only seven studies involved a longitudinal design, which makes it difficult to draw conclusions surrounding the causal factors in patient experiences.

It is also notable that nonbinary participants were underrepresented in the included studies with only one study focusing exclusively on nonbinary experiences and studies with varied transgender identities having only a small number of nonbinary participants. In addition to this, the Utrecht scale used in one study[57] is designed for binary transgender males and females, meaning that the validity of responses from nonbinary participants is questionable.[25] A newer version of the scale has since been designed and should be used when conducting research with nonbinary participants in the future.[59]

Further research into experiences of GAH should aim to have a diverse sample to explore the needs of specific samples within the transgender population as well as those with intersecting marginalized identities.

Conclusion

This study addressed a gap in the literature and provides a valuable insight into how transgender patients experience GAH and the factors that influence these experiences. In this review, transgender patients were shown to have a wide range of experiences in relation to GAH, with several factors influencing these experiences. These factors should be taken into consideration when providing GAH to promote positive health care experiences among transgender patients.

Authors' Contributions

Databases were searched by the first author and abstracts were screened by both authors. Quality appraisal and analysis were conducted by both authors. A first draft of the article was written by the first author and later, revisions were made by both authors. Both authors have reviewed and approved of the article before submission.

Disclaimer

The opinions expressed in this article are the authors' own and do not reflect the views of Maynooth University.

Author Disclosure Statement

No competing financial interests exist.

Funding Information

No funding was received for this article.

Supplementary Material

Supplementary Appendix

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Cite this article as: Howell JD, Maguire R (2023) Factors associated with experiences of gender-affirming health care: a systematic review, *Transgender Health* 8:1, 22–44, DOI: 10.1089/trgh.2021.0033.

Abbreviations Used

AFAB = assigned female at birth
AMAB = assigned male at birth
BMI = body mass index
BMQ = Beliefs About Medicines Questionnaire
BUT = Body Uneasiness Test
CA = cricothyroid approximation
DASS-21 = 21-item short-form version of the Depression, Anxiety and Stress Scale
EDITS = Erectile Dysfunction Inventory of Treatment Satisfaction
FSDS-R = Female Sexual Distress Scale—Revised
FtM = female to male
GAD-7 = Generalized Anxiety Disorder 7
GAH = gender-affirming health care
GAHT = gender-affirming hormone therapy
GPs = general practitioners
GS = gender spectrum
GSI = Global Severity Index
HCPs = health care professionals
IIEF-5 = International Index of Erectile Function 5
MMAT = Mixed Methods Appraisal Tool
MtF = male to female
NHS = National Health Service
PANAS = Positive and Negative Affect Scale
PHQ = Patient Health Questionnaire
PRISMA = Preferred Reporting Items for Systematic Reviews and Meta-Analyses
RSES = Rosenberg Self-Esteem Scale
SEAR = Self-Esteem and Relationship
SIBID-S = Situational Inventory of Body-Image Dysphoria, Short Form
STT = Steps to Transition Scale
TCS = Transgender Congruence Scale
TGNC = transgender/gender nonconforming
TWVQ = Trans Woman Voice Questionnaire
VHI-10 = Voice Handicap Index-10
VT = voice therapy